CLAIMS

We claim:

1 1. A method for integrated multi-channel retailing, comprising the steps of:

2 associating a plurality of message adaptors with a plurality of retail integrated

3 technology (IT) systems for processing common data in a plurality of retail channels,

4 wherein each said message adaptor has a corresponding retail IT system, said

5 association forming a peer-to-peer network;

6 intercepting in said message adaptors data processing messages generated in

7 said corresponding retail IT systems;

8 converting in said message adaptors said intercepted data processing messages

9 to a common message format and forwarding each converted data processing

10 message to others of said retail IT systems; and,

11 receiving said forwarded data processing messages in said message adaptors,

12 converting said received messages to a message format which can be processed in

13 said corresponding retail IT systems, and forwarding said converted messages to said

14 corresponding retail IT systems.

1 2. The method of claim 1, wherein said common message format is a format based

2 upon a user definable mark-up language.

1 3. The method of claim 2, wherein said user definable mark-up language is the

2 extensible markup language (XML).

1 4. The method of claim 1, wherein said step of forwarding messages which have

2 been formatted in a common message format comprises the steps of:

3   forwarding each converted data processing message to a data control point; and,

4   routing said forwarded messages in said data control point to said others of said

5 retail IT systems.

1 5. The method of claim 1, further comprising the step of queuing said intercepted

2 messages in message queues in said message adaptors prior to converting said

3 messages to a common data format.

1 6. The method of claim 1, further comprising the step of queuing said converted

2 messages in message queues in said message adaptors prior to forwarding said

3 messages to said others of said retail IT systems.

1 7. A machine readable storage having stored thereon a computer program for

2 integrating multi-channel retailing, said computer program having a plurality of code

3 sections executable by a machine for causing the machine to perform the steps of:

4   associating a plurality of message adaptors with a plurality of retail integrated

5 technology (IT) systems for processing common data in a plurality of retail channels,

6 wherein each said message adaptor has a corresponding retail IT system, said

7 association forming a peer-to-peer network;

8   intercepting in said message adaptors data processing messages generated in

9   said corresponding retail IT systems;

10   converting in said message adaptors said intercepted data processing messages

11   to a common message format and forwarding each converted data processing

12   message to others of said retail IT systems; and,

13   receiving said forwarded data processing messages in said message adaptors,

14   converting said received messages to a message format which can be processed in

15   said corresponding retail IT systems, and forwarding said converted messages to said

16   corresponding retail IT systems.

1   8.   The machine readable storage of claim 7, wherein said common message

2   format is a format based upon a user definable mark-up language.

1   9.   The machine readable storage of claim 8, wherein said user definable mark-up

2   language is the extensible markup language (XML).

1   10.   The machine readable storage of claim 7, wherein said step of forwarding

2   messages which have been formatted in a common message format comprises the

3   steps of:

4   forwarding each converted data processing message to a data control point; and,

         routing said forwarded messages in said data control point to said others of said

retail IT systems.

1   11.   The machine readable storage of claim 7, further comprising the step of queuing

2   said intercepted messages in message queues in said message adaptors prior to

3   converting said messages to a common data format.

1   12.   The machine readable storage of claim 7, further comprising the step of queuing

2   said converted messages in message queues in said message adaptors prior to

3   forwarding said messages to said others of said retail IT systems.

1   13.   A method for integrated multi-channel retailing, comprising the steps of:

2   intercepting data processing messages in a retail information technology (IT)

3   system for use in one type of retail channel;

4   formatting data in said intercepted messages using a user-definable markup

5   language, and asynchronously communicating said formatted data to at least one other

6   retail IT system for use in at least one other type of retail channel; and

7   receiving asynchronously communicated formatted data from at least one other

8   retail IT system, converting said received formatted data to a format which can be

9   processed in said retail IT system for use in said one type of retail channel.

1   14.   The method of claim 13, wherein said user definable markup language is the

2   extensible markup language (XML).

1 15. The method of claim 13, wherein said asynchronously communicating step

2 comprises the steps of:

3 asynchronously forwarding each converted data processing message to a data

4 control point; and,

5 asynchronously routing said forwarded messages in said data control point to

6 said others of said retail IT systems.

1 16. The method of claim 13, wherein said step of asynchronously communicating

2 said formatted data to at least one other retail IT system for use in at least one other

3 type of retail channel step comprises the step of:

4 queuing said formatted messages in a message queue; and,

5 incrementally forwarding each said queued messages to said others of said retail

6 IT systems.

1 17. A machine readable storage having stored thereon a computer program for

2 integrating multi-channel retailing, said computer program having a plurality of code

3 sections executable by a machine for causing the machine to perform the steps of:

4 intercepting data processing messages in a retail information technology (IT)

5 system for use in one type of retail channel;

6 formatting data in said intercepted messages using a user-definable markup

7 language, and asynchronously communicating said formatted data to at least one other

8 retail IT system for use in at least one other type of retail channel; and

9   receiving asynchronously communicated formatted data from at least one other

10   retail IT system, converting said received formatted data to a format which can be

11   processed in said retail IT system for use in said one type of retail channel.

1   18.   The machine readable storage of claim 17, wherein said user definable markup

2   language is the extensible markup language (XML).

1   19.   The machine readable storage of claim 17, wherein said asynchronously

2   communicating step comprises the steps of:

3   asynchronously forwarding each converted data processing message to a data

4   control point; and,

          asynchronously routing said forwarded messages in said data control point to

said others of said retail IT systems.

20.   The machine readable storage of claim 17, wherein said step of asynchronously

2   communicating said formatted data to at least one other retail IT system for use in at

3   least one other type of retail channel step comprises the steps of:

4   queuing said formatted messages in a message queue; and,

5   incrementally forwarding each said queued messages to said others of said retail

6   IT systems.

1   21. A method for integrated multi-channel retailing, comprising the steps of:

2   detecting a modification to common data in a retail information technology (IT)

3   system configured for use in a retail channel;

4   formatting a message encapsulating said detected modification to said common

5   data, and forwarding said formatted message to other retail IT systems configured for

6   use in other retail channels; and,

7   receiving formatted messages which encapsulate modifications to common data,

8   extracting said common data from said formatted message, formatting said extracted

9   data to a format which can be processed in said retail IT system configured for use in

10   said one type of retail channel, and forwarding said formatted data to said retail IT

11   system.

22. A machine readable storage having stored thereon a computer program for

2   integrating multi-channel retailing, said computer program having a plurality of code

3   sections executable by a machine for causing the machine to perform the steps of:

4   detecting a modification to common data in a retail information technology (IT)

5   system configured for use in a retail channel;

6   formatting a message encapsulating said detected modification to said common

7   data, and forwarding said formatted message to other retail IT systems configured for

8   use in other retail channels; and,

9   receiving formatted messages which encapsulate modifications to common data,

10   extracting said common data from said formatted message, formatting said extracted

11   data to a format which can be processed in said retail IT system configured for use in

12   said one type of retail channel, and forwarding said formatted data to said retail IT

13   system.